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1Generalise, a flexible and easy to manage generalisation tool

Nicolas Regnauld

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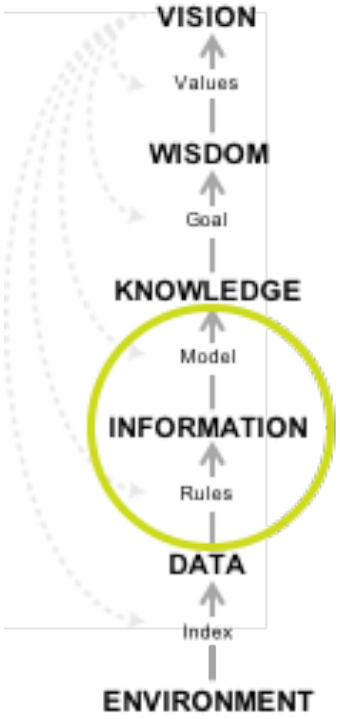
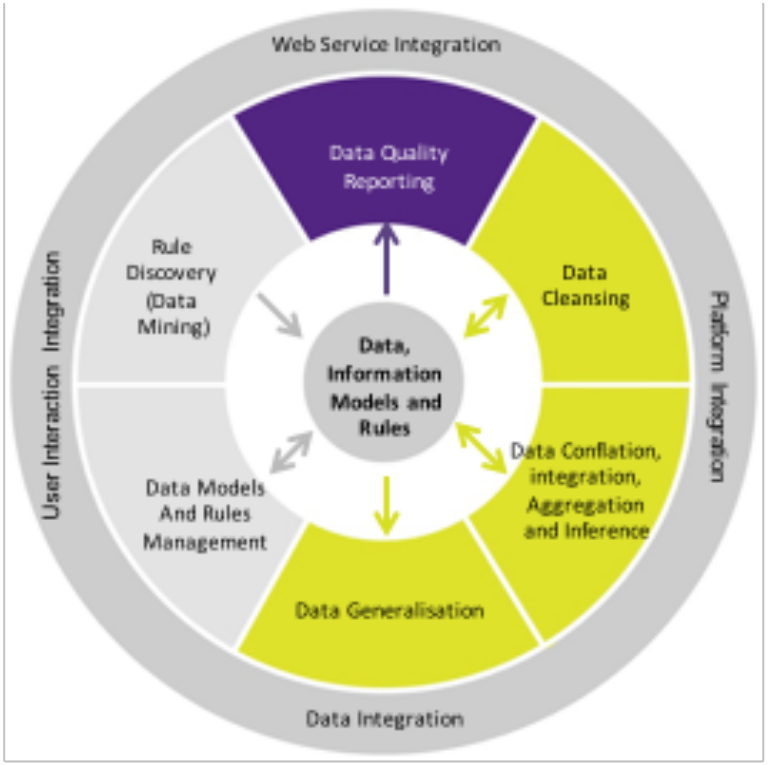
A rules-based approach to spatial data management …





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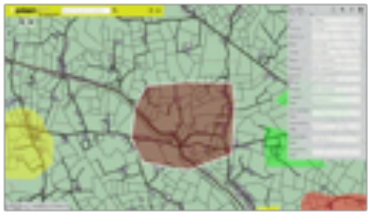
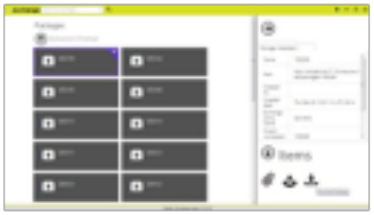
… through automated data lifecycle management

1publish

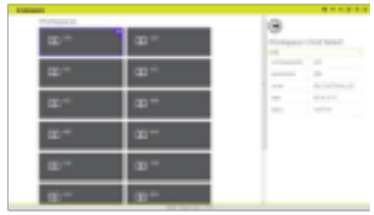


1plan

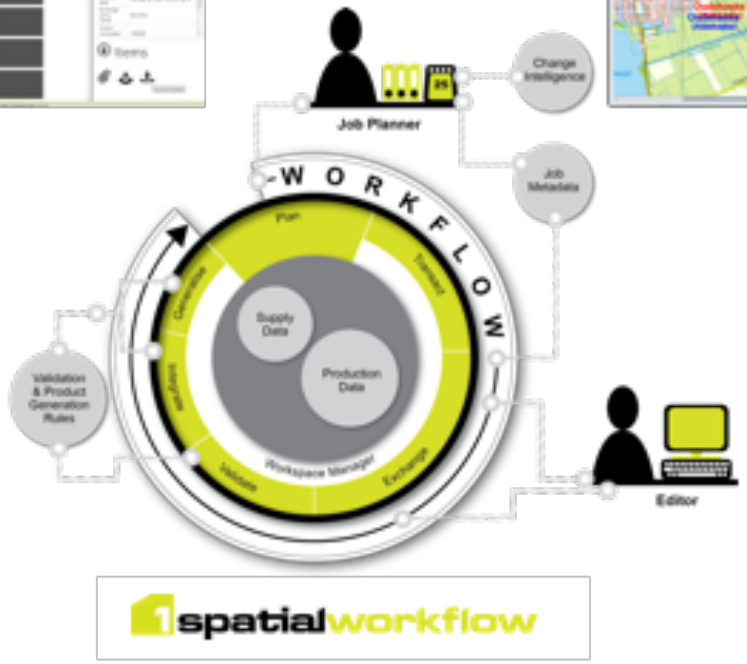


1exchange

1transact



1generalise



1edit

1integrate

1validate

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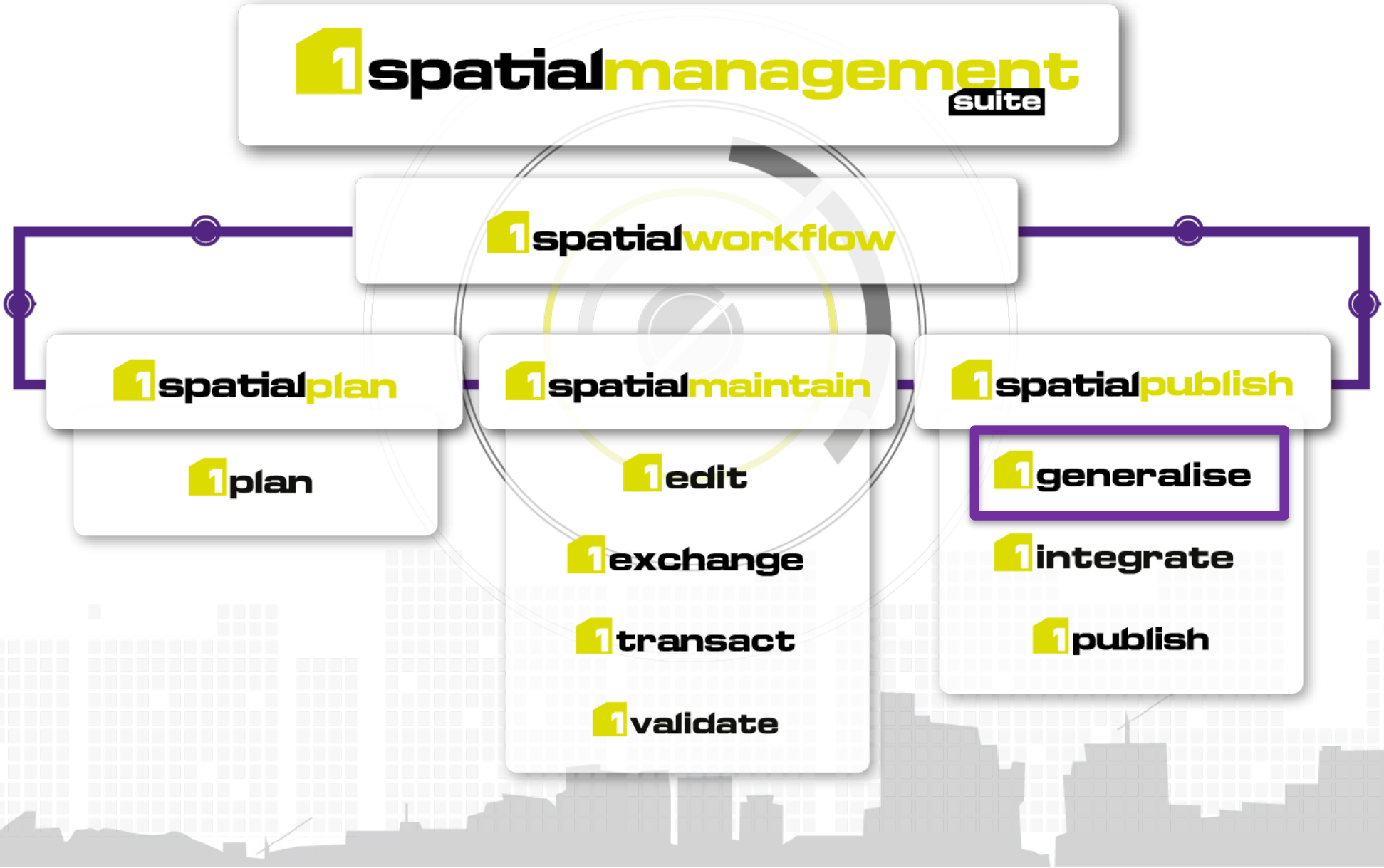
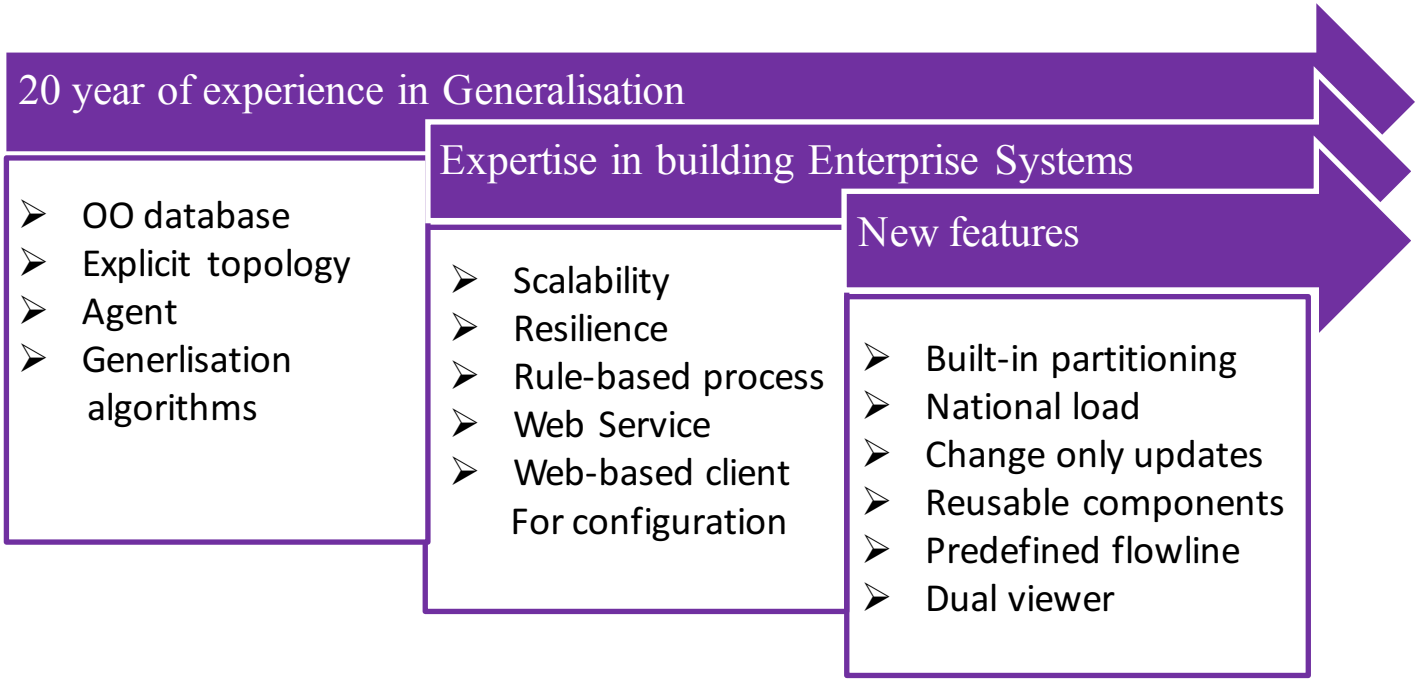


1Generalise: Building on expertise gained from 20+ years of close relationships with NMAs



Key Concepts

Flowlines Designer

Classification Editor

Profile Editor

Flowline:

- Associated with a specific type of map
- Provides the logic used to generalise all themes relevant to that map
- Made of reusable components (subflows, steps)

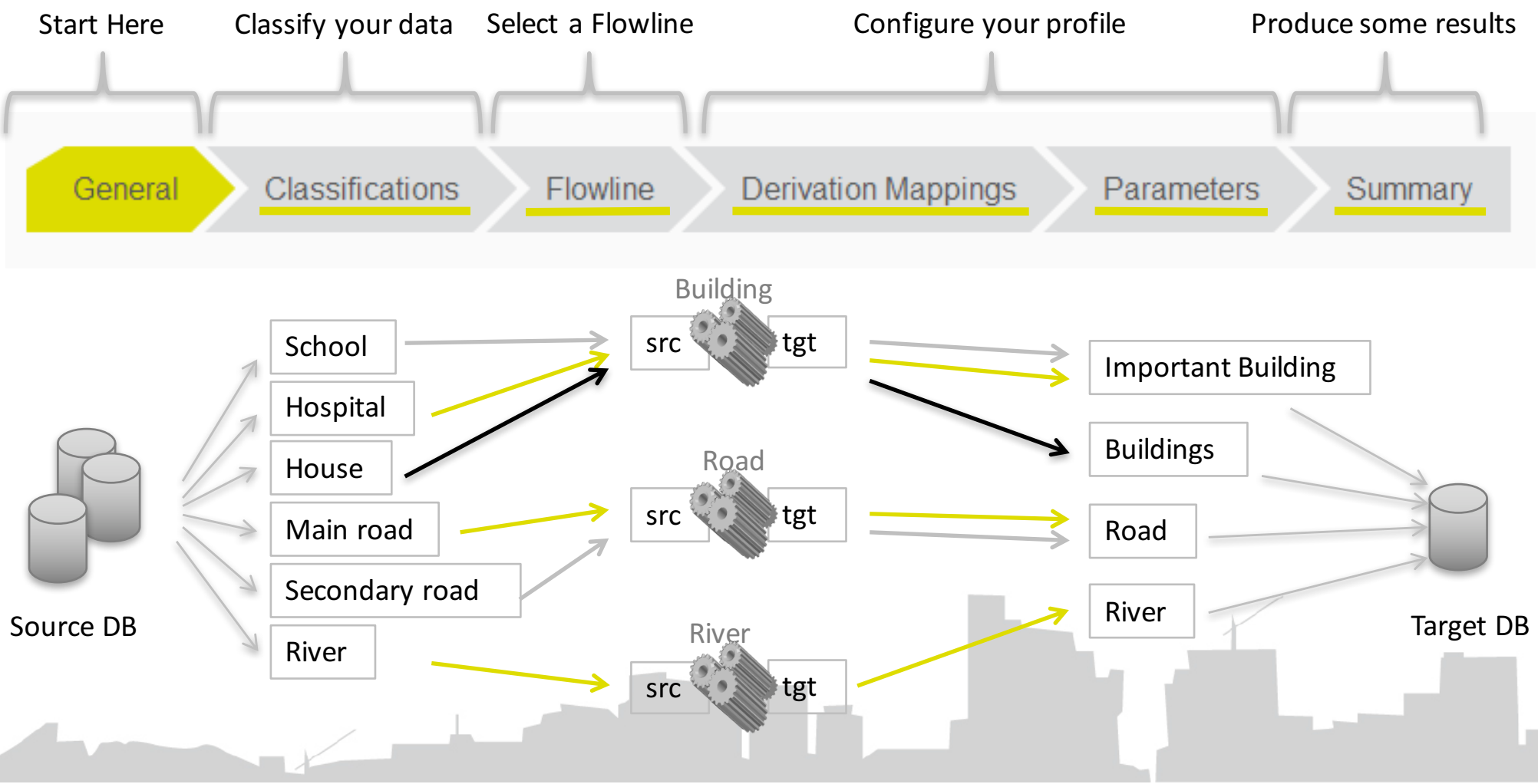
Classification:

Used to reclassify user data into themes which can be mapped to Flowline themes.

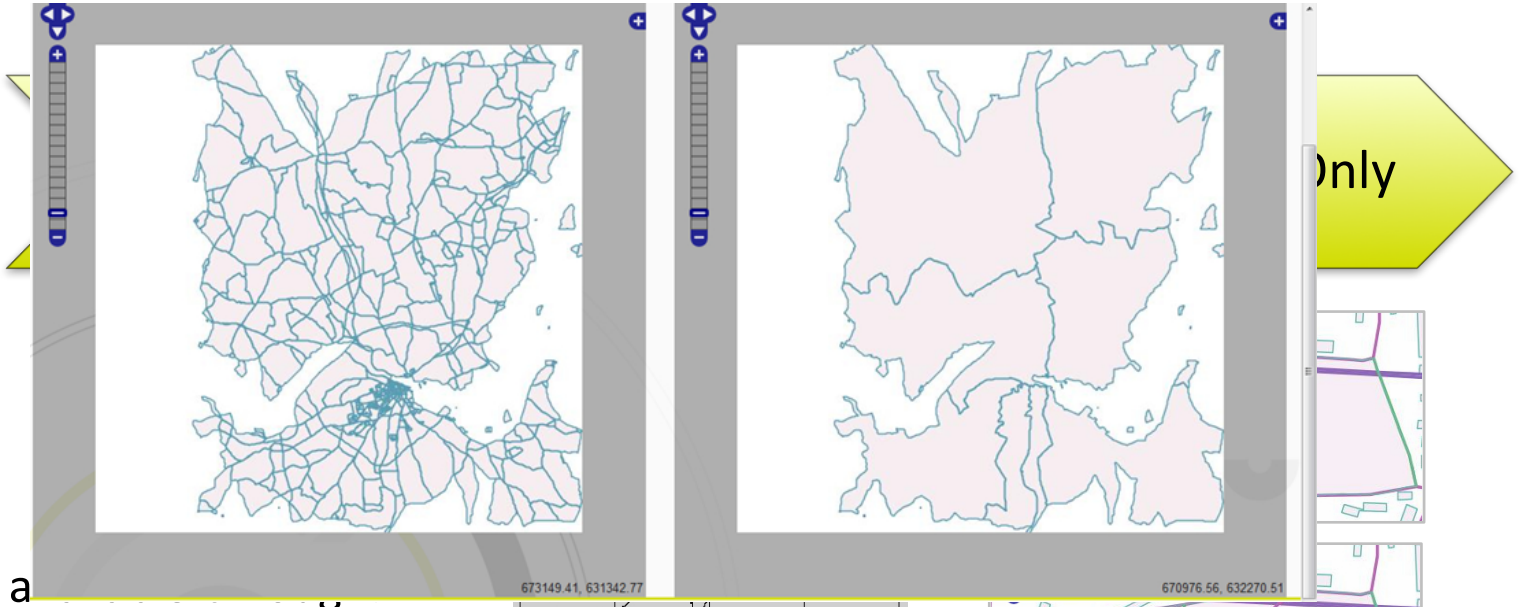
Profile:

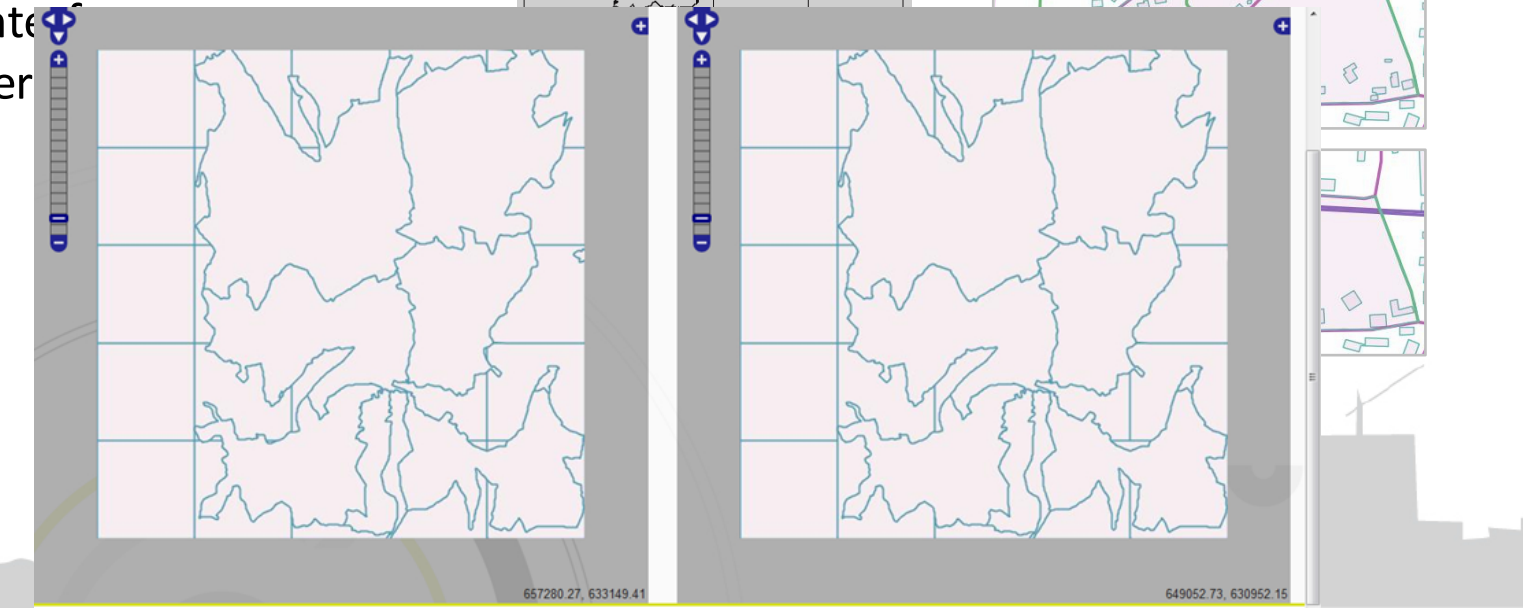
Configuration settings to apply a Flowline to classified data

Configuring your profile



Processing Modes





All modes a

- User Inte
- Web Ser

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DEMO

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Generalisation tools available in 1Generalise

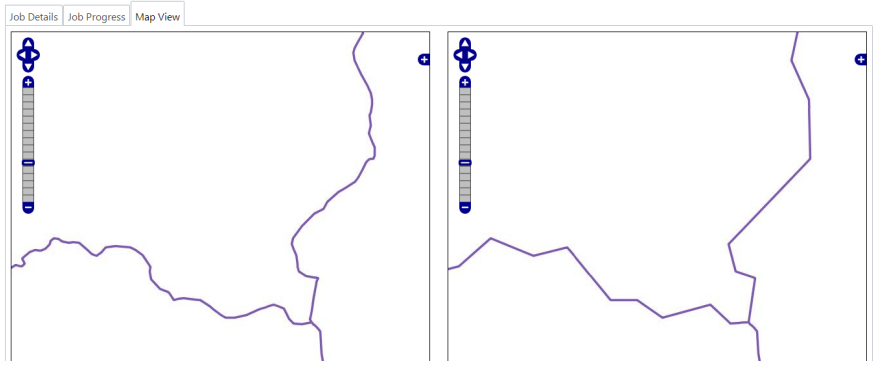
Simplification and smoothing of lines / boundaries

Topology awareness:

- Maintains shared geometries
- Does not generate new intersections

Simplification algorithms:

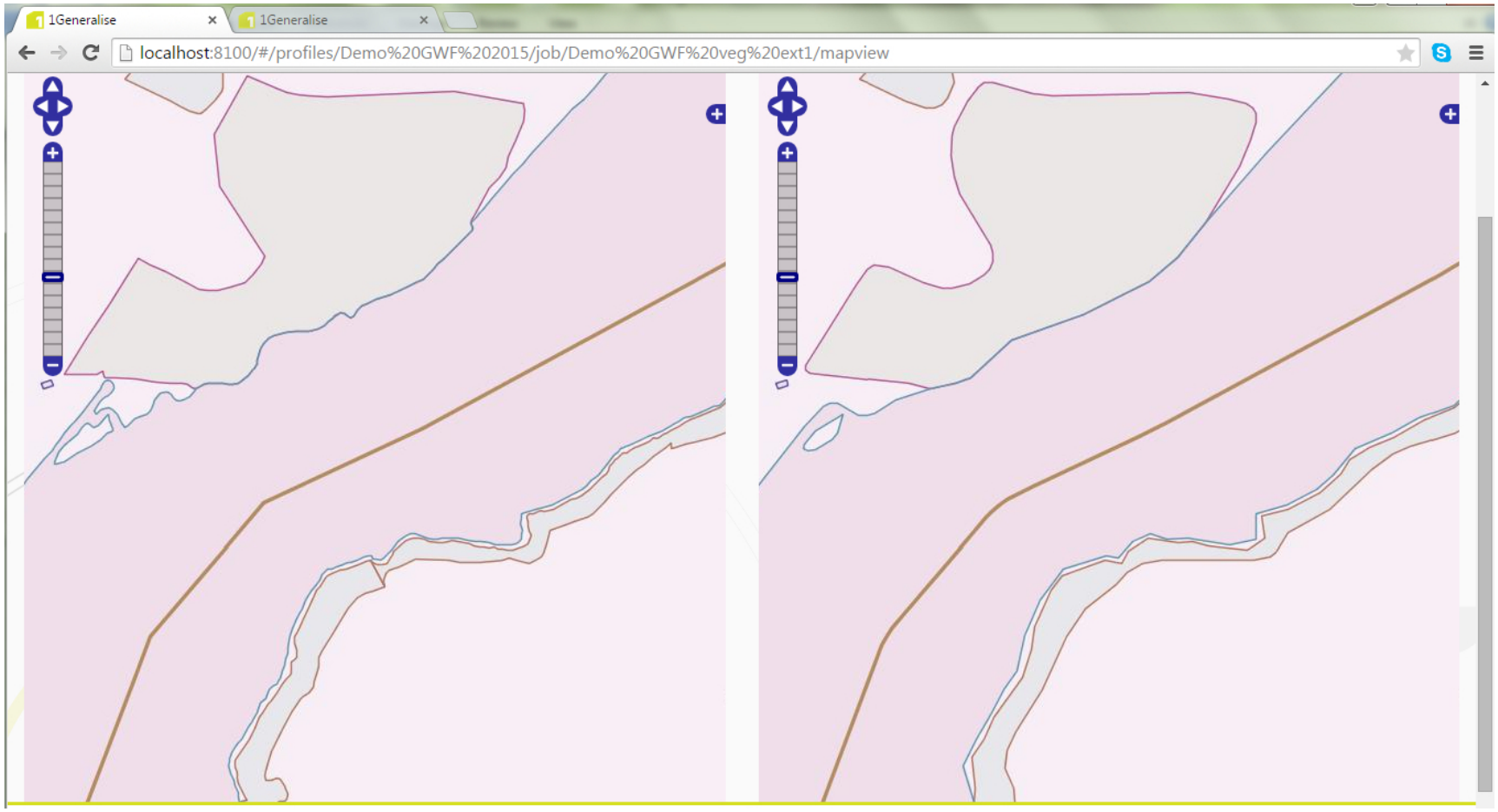
- Douglas and Peucker
- Visvalingham
- Weighted effective Area



Smoothing algorithms:

- Gaussian Smoothing

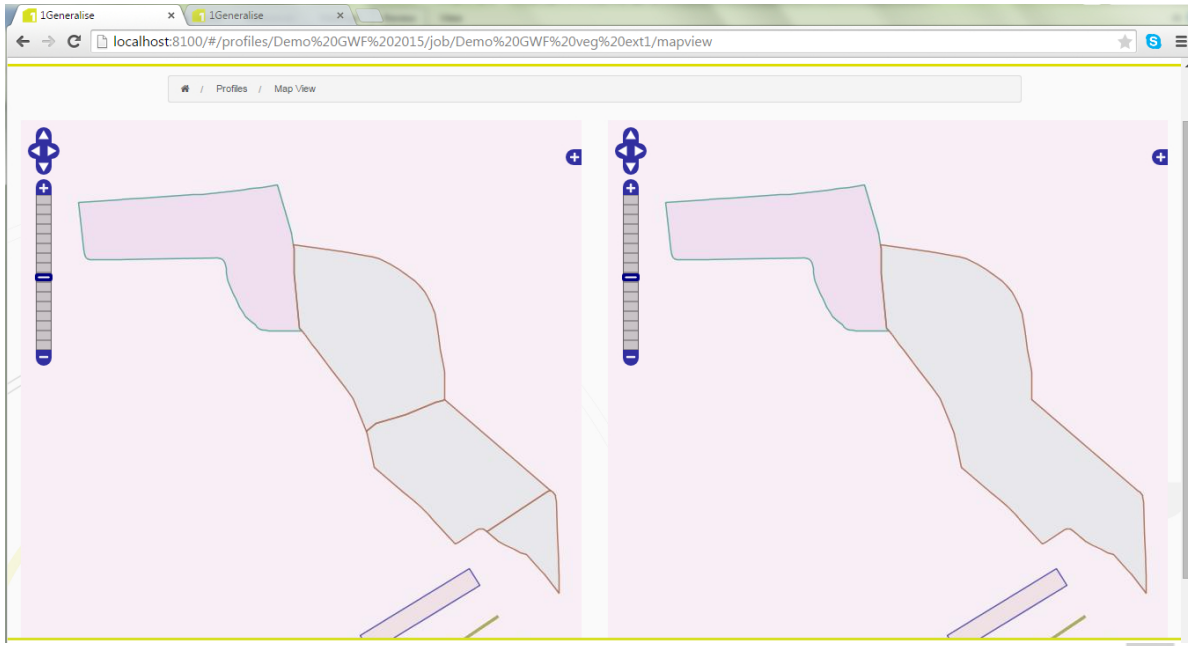
Simplification of lines / boundaries



Merge adjoining area features

Control:

- Only merges features of the same target theme
- Possibility to modify the rule to prevent merging when specific linear features follow the shared boundary

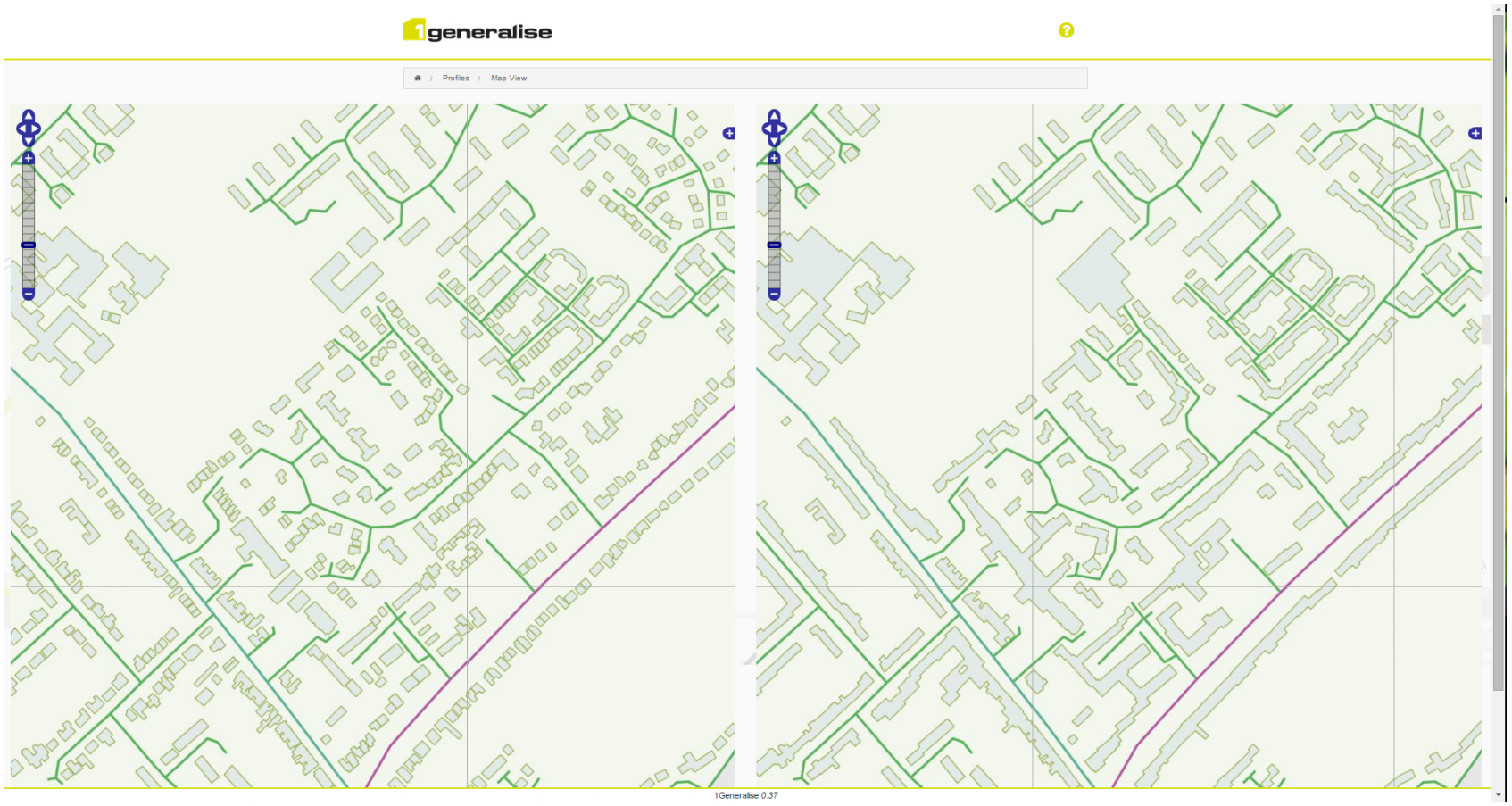


Aggregate area features in close proximity

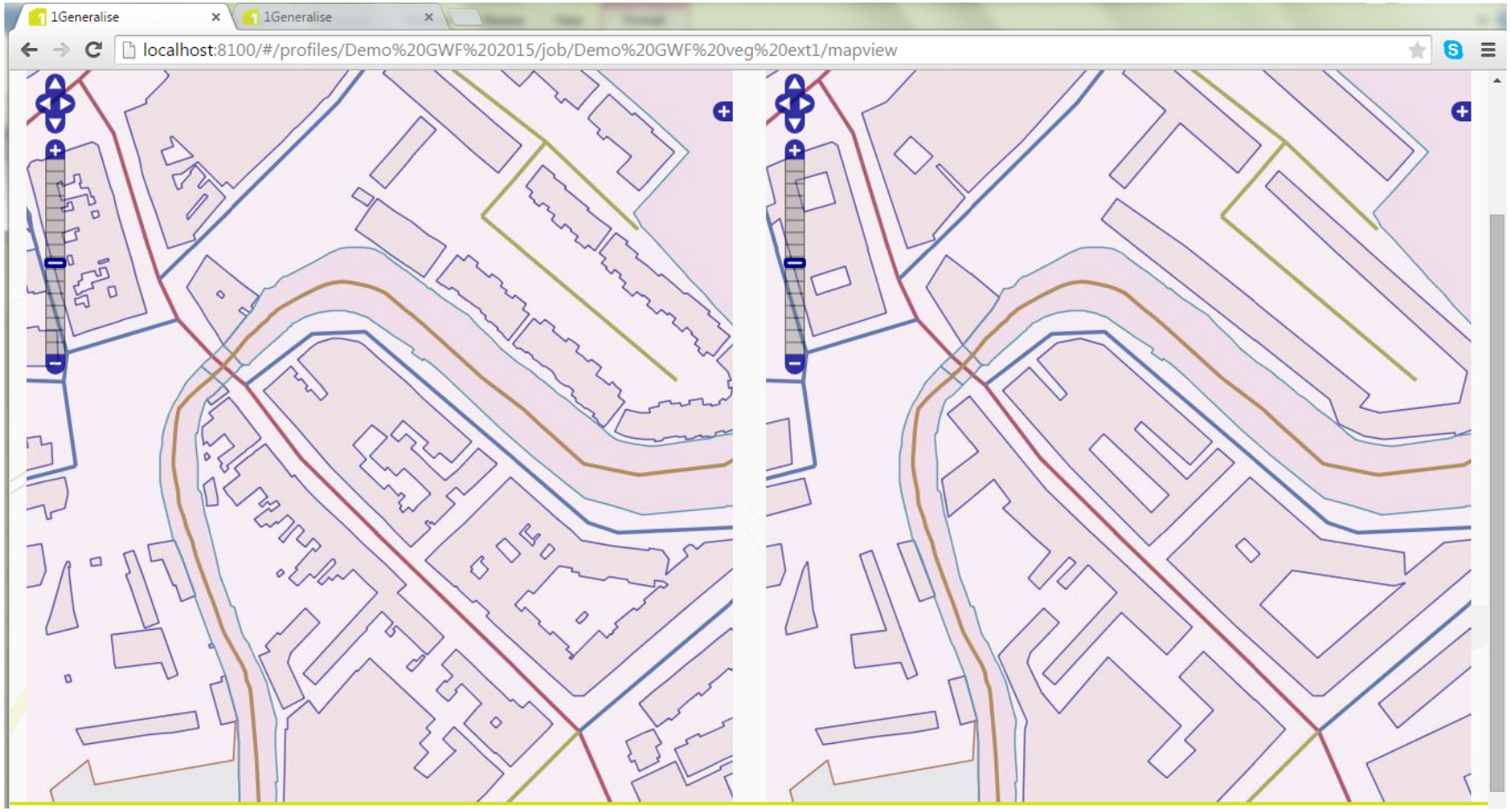
Control:

- Only merges features of the same target theme
- Prevents from aggregating across features of given themes

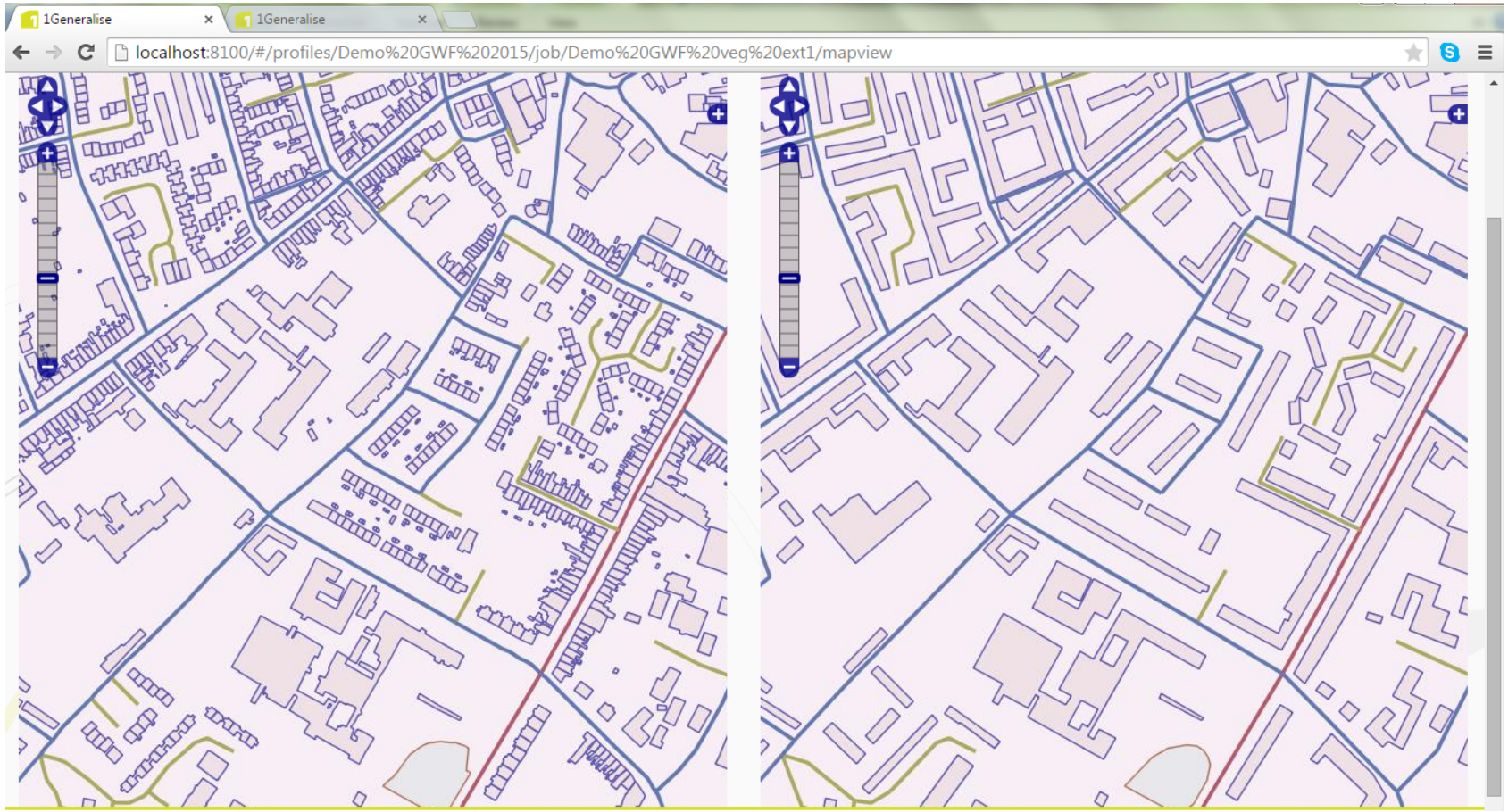
Aggregate area features in close proximity



Building simplification

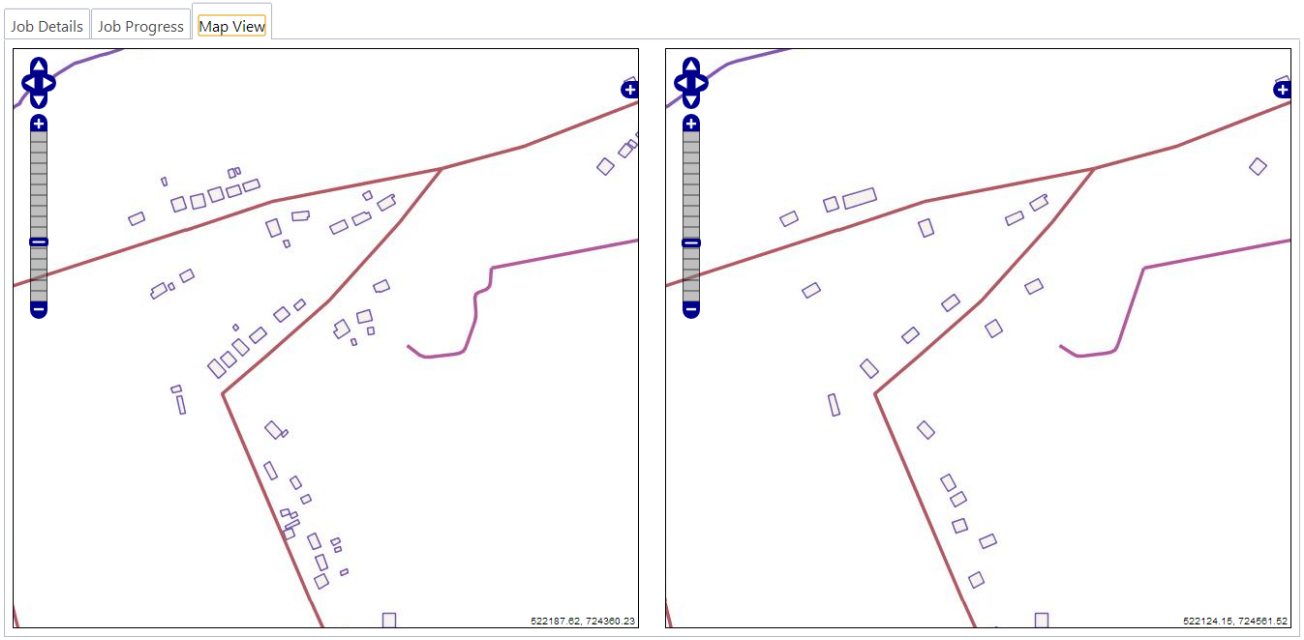


Remove short dead ends



Action based operations

Reclassification
Delete / Enlarge small features
Fill gaps



Summary

- Dedicated application for generalisation
  - National load – change only update
- Production ready
  - Scalable and resilient
- Can be integrated in any system
  - Service Oriented Architecture
- Easy to configure and use
  - Rule-based action editor
  - Reusable components, predefined flowline

Potential integration with a vario scale system

- 1Generalise used to generate fixe scale slices for a vario-scale cube
  - Through SOAP Api
  - Generalisation rules can be setup through a Web interface
  - Should be quick to put in place
  - Training required
- Integrate Vario scale principles in 1Generalise
  - Requires R&D on 1Spatial side
  - Business case dependant

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Thank you

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